AMENDMENTS TO THE SPECIFICATION:

Page 3, replace the paragraph, beginning on line 14, with the following amended paragraph:

--It was also known in the art to which the present invention pertains that after the titanium film and the titanium nitride film have been deposited, then a heat treatment is carried out in a nitrogen atmosphere to cause a silicidation reaction of titanium with silicon on an interface between the titanium film and the silicon substrate, so that a titanium silicide film is formed on the interface of the silicon substrate with the titanium film, whereby a contact resistance between the plug and the silicon substrate is reduced. This heat treatment can concurrently cause a ~~nitratio~~ nitration reaction of unreacted titanium with nitrogen in the titanium nitride film, thereby increasing the barrier capability of the titanium nitride film as a barrier metal. This heat treatment may be carried out by using a furnace as disclosed in the above mentioned Japanese laid-open patent publication No. 5-299275 or by use of a lamp anneal system for rapid anneal in a short time and this lamp anneal system is suitable for a large size substrate.--

Page 6, replace the paragraph, beginning on line 4, bridging pages 6 and 7, with the following amended paragraph:

--FIG. 1 is a fragmentary and enlarged cross sectional elevation view illustrative of a bottom portion of a contact hole in an inter-layer insulator and over a titanium nitride film in

an upper region of a silicon substrate after a heat treatment has been carried out to cause a silicidation reaction for forming the titanium silicide film. A boro-phospho-silicate glass film 2 as an inter-layer insulator is formed on a silicon substrate 1. A contact hole having a high aspect ratio is formed in the inter-layer insulator 2 by use of a photo-lithography and a subsequent dry etching process so that the contact hole reaches onto a surface of the silicon substrate. A titanium film 3 is deposited on the bottom and the side walls of the contact hole and on a surface of the inter-layer insulator by a sputtering method, for example, a collimator sputtering method for obtaining a good step overage of the titanium film 3. Subsequently, a titanium nitride film 4 is then deposited on the titanium film 3 by a further sputtering method, for example, a collimator sputtering method for obtaining a good step overage of the titanium film 3. In order to reduce a contact resistance of the titanium film 3 with the silicon substrate 1, a heat treatment, for example, a rapid thermal anneal such as a lamp anneal is carried out in an inert gas atmosphere such as a nitrogen gas atmosphere so as to cause a silicidation reaction of titanium with silicon on an interface between the titanium film 3 and the silicon substrate 1, so that a titanium silicide film 5 is formed on the interface of the silicon substrate 1 with the titanium film 3, whereby a contact resistance between the titanium film 3 and the silicon substrate 1 is reduced. Concurrently, a ~~nitratio~~ nitration reaction of

unreacted titanium with nitrogen in the titanium nitride film 4 is caused, thereby increasing the barrier capability of the titanium nitride film 4 as a barrier metal film. The heat treatment to the titanium nitride film 4 as the barrier metal film causes an increase in density of the titanium nitride film 4, thereby to change the compressive stress of the titanium nitride film 4 into a tensile stress which forms a crack at a corner of the titanium nitride film 4. The crack is likely to appear at the corners of the titanium nitride film 4. Once the cracking appears in the titanium nitride film 4, then tungsten hexafluoride gas used for a subsequent chemical vapor deposition to deposit a tungsten film to bury the contact hole with the tungsten film enters into the crack in the titanium nitride film 4 so that tungsten hexafluoride may be reacted with titanium in the titanium film 3 or silicon in the silicon substrate 1, whereby a contact resistance at the bottom of the contact hole is increased and also a p-n junction may be broken.--

Page 28, replace the paragraph, beginning on line 33, bridging pages 28 and 29, with the following amended paragraph:

--Subsequently, a lamp anneal is carried out in a nitrogen atmosphere at a temperature in the range of 650-720°C for 10-60 seconds, wherein a temperature rising rate is in the range of 50-100°C/seconds, whereby a titanium silicidation reaction of titanium in the titanium film 3 with silicon in the silicon substrate 1 is cased to form a titanium silicide film 5

on an interface between the titanium film 3 and the silicon substrate 1, thereby reducing a contact resistance of the titanium film 3 with the silicon substrate 1. This lamp anneal further causes a ~~nitratio~~ nitration reaction of unreacted titanium with nitrogen in the titanium nitride film 4, thereby increasing a barrier property of the titanium nitride film 4.--